May 23, 2018

Testimony of Gregory M. Baird on HB 5723

Chairman Chatfield, Majority Vice-Chair Lilly, Minority Vice-Chair Geiss, and Members of the Committee:

Thank you for the opportunity to testify today in support of HB 5723. My name is Greg Baird and I come to you today as a water finance and infrastructure asset management expert.

I develop water asset management training programs with Virginia Tech, Louisiana Tech and The University of Wisconsin Madison and participate in the development and promotion of asset management best practices with The American Society of Civil Engineers, The American Public Works Association, The American Water Works Association and The Government Finance Officers Association. My approach is based on a background in municipal water utility finance and affordability which compliments asset management life cycle costing and comparative analysis to strive towards getting to the lowest life cycle cost.

I have experienced the full range of funding struggles, resource allocations challenges, the public outrage of increasing water bills and increasing water quality issues as a consultant and public servant working as a financial officer for a full-service California municipality with a population over 200,000 and the Chief Financial Officer of Colorado's 3rd largest municipal water and sewer utility.

I am here today to share with you a few things I have learned.

1) Asset management provides a framework to address both fiscal and infrastructure sustainability issues.

2) Life cycle management of assets requires you to understand your assets from cradle to grave, which in turn, provides the basis of calculating the total cost of ownership. This includes not only the initial cost, but the operations, maintenance and repair and disposal costs of your assets over a very long life.

3) Open Procurement and Comparative Analysis – the policy of HB 5723 - is at the foundation of asset management and is the only way to achieve real cost savings and avoid unnecessary cost burdens placed on citizens.

4) Open procurement means competition, competition drives innovation, innovation drives sustainability, sustainability drives affordability.

5) Our water and sewer systems are complex and face new challenges while protecting the public health.

6) Any water or sewer system, not diversified or able to use different diameter and different materials types is not really doing asset management and is failing to do life cycle comparative analysis and as a result is driving up unnecessary risk or financial burden to the system owners- the rate payers.

7) The lack of open procurement and comparative analysis practices- deceives the financial manager, undermines the public budgeting process and the authority and stewardship of the elected officials.

8) The US Conference of Mayors Water Council has estimated local governments provide a 98% share of water infrastructure spending. While an individual community may be able to restrict open competition and accept the consequences of their actions, it is a different matter for that community to request federal, state or other public-non-local funding to support their higher cost decisions as it relates to a lack of open procurement and comparative analysis.

9) HB 5723 is about the state's stewardship of public funds. HB 5723 does not diminish the decision-making responsibility of an engineer or a local governing body regarding the use of local funds. HB 5723 gives the stewards of the state's public funds the ability ensure that a standard of transparency is raised when allocating those precious tax payer's dollars.

10) HB 5723 will support the improvement and quality of the Michigan Department of Environmental Quality's drinking water system's asset management plans (AMP) now required as of January 1, 2018.

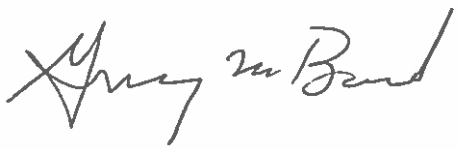
My written testimony includes additional background on the MDEQ's asset management plan requirements, but it is worth highlighting for you now that

open competition and the provisions of HB 5723 are aligned with - and in some cases fulfill key recommendations of - every other water initiative with which the state is engaged.

Nationally, open competition represents a 'best practices' type approach to municipal procurement and codifying this into law is an important leadership step that will strengthen the state and is worthy of your support.

I would be pleased to answer any questions you may have. Thank you.

Sincerely,



Gregory M. Baird

President

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Background on Asset Management

Water systems are made up of assets; some are buried assets and "invisible," while the rest are visible. The assets that make up a water system lose value over time as the system ages and deteriorates. As the assets deteriorate, the level of service the utility's customers desire may become compromised, operation and maintenance (O&M) costs can increase, and the utility may be faced with excessive costs it can no longer afford. There is an approach to managing the assets of the system that can assist the utility with making better decisions on caring for these aging assets. This approach is called asset management.

Michigan Department of Environmental Quality Office of Drinking Water and Municipal Assistance: *Asset Management Guidance for Submission to the Department of Environmental Quality* (August 2017)

"Managing these assets should include a program to identify and address the deficiencies and deterioration that threaten the ability of the system to provide a safe and reliable supply of water. Many utilities are dealing with long neglected infrastructure, and asset management is a tool utilities can use to decide where best to allocate resources to restore, maintain, and improve the water system. Even those utilities that have not neglected their infrastructure will benefit from utilizing asset management to operate their utility in the most cost-effective manner."

Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), defines an AMP as, "a program that identifies the desired level of service at the lowest life cycle cost for rehabilitating, repairing, or replacing the assets associated with the waterworks system."

MDEQ is now requiring all water systems serving over 1,000 people to submit asset management plans that must include the following elements:

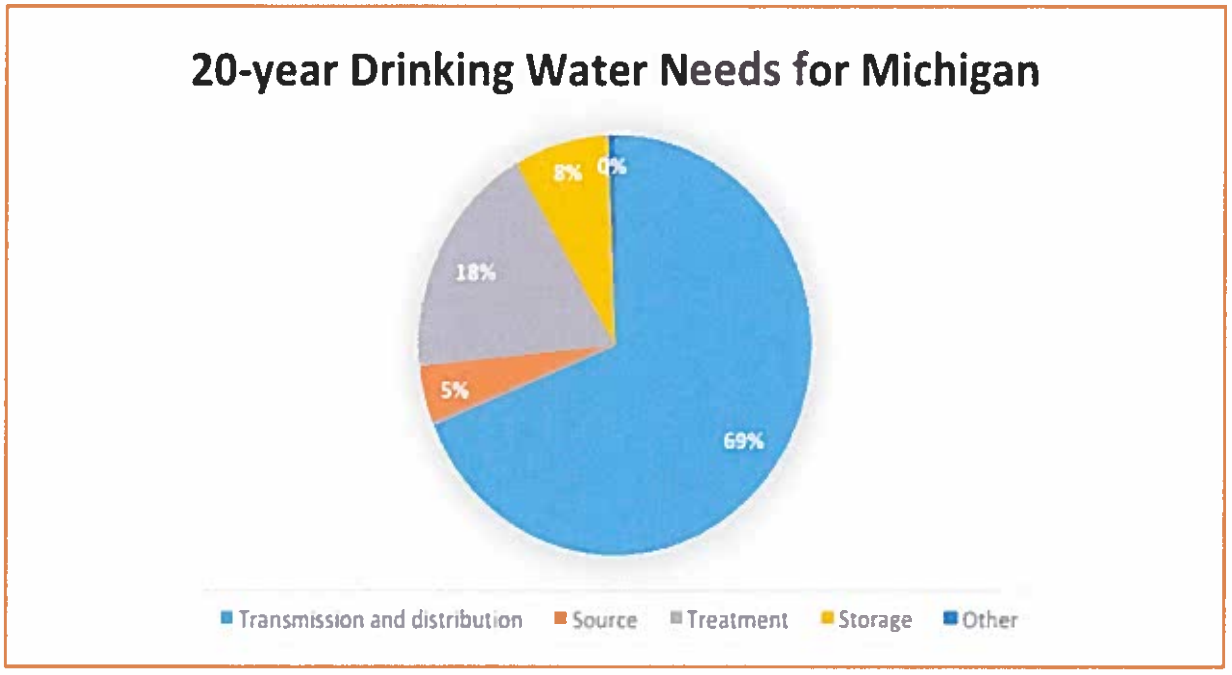
- Annual operating budget
- Current rates
- Documentation of legal authority for rate setting

• Analysis of how the rates and other funding sources offset the anticipated costs

• Plan to close the funding gap (if present)

Michigan Water Infrastructure Concerns

Michigan is nearly surrounded by the Great Lakes, which contain 21% of the world's fresh water, and is served by multiple subsurface aquifers. Yet certain drinking water system "owners" (e.g., municipalities) face scarcity concerns, contamination, and aging treatment/distribution systems that are not aligned with drinking water user needs. Underground pipes represent 69% of MI's drinking water funding needs over the next 20 years. Michigan's shortfalls have ranged between $284 and $563 million per year in funding the gap of drinking water infrastructure.



Source: ASCE Report Card

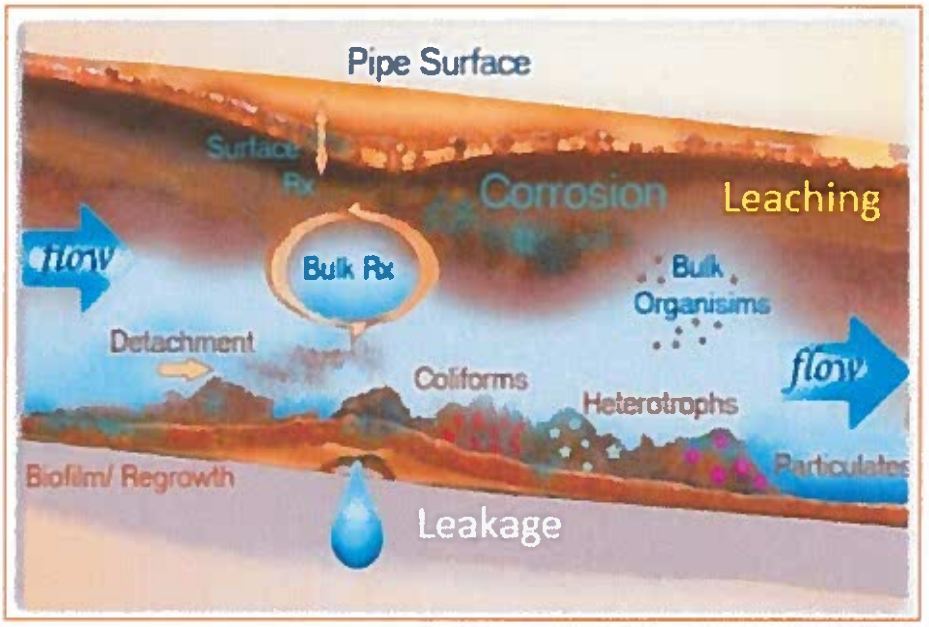
Michigan's water infrastructure is subject to threats/stresses, including:

- Breaks
- Aging (including material degradation, dated treatment technology, leaching, biofilm buildup)
- Low pressure

- Leakage from corrosion/impact

Failures commonly accelerate T&D rehabilitation. Failures become more frequent with aging, as susceptible materials (e.g., unlined iron/steel) corrode or enable biofilm build-up - see Figure 2.

FIGURE 2: DRINKING WATER SYSTEM CONTAMINATION AND AGING



Source: U.S. EPA

Per the 2018 Michigan Infrastructure report, between 10 and 50 percent of the treated water is lost through leakage.

References:

The American Society of Civil Engineers 2018 Infrastructure Report Card for Michigan's Drinking Water:

https://www.infrastructurereportcard.org/state-item/michigan/

Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act 399):

https://www.michigan.gov/documents/deq/2014-023_EQ_Final_Supplying_Water_to_the_Public_505115_7.pdf

Michigan Department of Environmental Quality Office of Drinking Water and Municipal Assistance:

https://www.michigan.gov/documents/deq/deq-dwma-cws-assetmgmtsubmissionguidance_549603_7.pdf

https://www.michigan.gov/documents/deq/deq-ess-mfs-formsguidance-DWassetmngmntguide_426744_7.pdf

EPA Asset Management 101:

https://www.epa.gov/sites/production/files/2015-10/documents/assetmgt101.pdf

A Framework for Holistic Life Cycle Cost Analysis for Drinking Water Pipelines from Virginia Tech:

https://vtechworks.lib.vt.edu/handle/10919/78357